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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,804	02/08/2002	Youichirou Sugino	04558/063001	3655
23850	7590	04/27/2004	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			CHOWDHURY, TARIFUR RASHID	
			ART UNIT	PAPER NUMBER
			2871	

DATE MAILED: 04/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/072,804

Applicant(s)

SUGINO ET AL.

Examiner

Tarifur R Chowdhury

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-40 is/are allowed.
- 6) ☒ Claim(s) 1,6-10,15-19 and 23-27 is/are rejected.
- 7) ☒ Claim(s) 2-5,11-14 and 20-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. **Claims 1, 6-10, 15-19 and 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano et al., (Nakano), JP 60-083903 A in view of Michihata et al., (Michihata), USPAT 6,320,042.**

4. Nakano discloses (title/abstract) and shows in Fig. 4, a polarizing plate used in a liquid crystal display wherein the polarizing plate comprising a polarizer (2), wherein all surfaces of the polarizer are covered with low moisture-permeable layers (1, 1') having moisture permeability of 100 g/m<sup>2</sup>.24h (which is less than 310 g/m<sup>2</sup>.24h). Nakano further discloses (abstract) and shows in Fig. 3 that all sides of the polarizer are also covered with sealing layer (3) of epoxy resin having low moisture permeability. Nakano also

discloses that the thickness of the protective layer with a relatively small moisture permeability is required to be 50  $\mu\text{m}$  or more and desirably 100  $\mu\text{m}$  or more (translation of pages 12-13).

Nakano does not explicitly disclose that the layer (3) has permeability of 310  $\text{g/m}^2\cdot 24\text{h}$  or less.

However, Nakano discloses that both the protective layers (1, 1') and the sealing layer (3) have low moisture permeability and further discloses that the permeability of the protective layers is 100  $\text{g/m}^2\cdot 24\text{h}$ . Nakano also discloses that by covering all surfaces and sides of a polarizer with low moisture permeability layers, it is possible to obtain a polarizing element with high reliability and maintain its polarizing power even environment at high humidity (abstract).

Nakano is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use sealing layer having low moisture permeability such as 100  $\text{g/m}^2\cdot 24\text{h}$ .

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use sealing layers having low moisture permeability of 100  $\text{g/m}^2\cdot 24\text{h}$  so that a polarizer having high reliability and capable of maintaining its power even environment at high humidity is obtained.

Typically an absorptive linear polarizer is attached to at least one side of a liquid crystal cell. Nakano also discloses that the polarizer comprises a polyvinyl alcohol film (abstract).

Still lacking is the limitation that the thickness of the protective layer is 40  $\mu\text{m}$  or less.

Michihata discloses a polarizing plate protective cellulose triacetate film (title). Michihata also discloses that the thickness of the protective film is most preferably between 20 and 60  $\mu\text{m}$  (overlaps the claimed range at 20 to 40  $\mu\text{m}$ ). Further, it is most desirable practice in the art is to reduce the thickness of a film and thus to obtain a light weight device.

Michihata is evidence that ordinary workers in the art would find a reason, suggestion or motivation to use a protective layer having a thickness of 40  $\mu\text{m}$  or less.

Further, it should also be noted that since Nakano discloses that small moisture permeability (such as 100  $\text{g/m}^2\cdot 24\text{h}$ ) is required for a thickness of 50  $\mu\text{m}$  or more one of ordinary skill in the art would realize that moisture permeability of more than 100  $\text{g/m}^2\cdot 24\text{h}$  would require the thickness to be less than 50  $\mu\text{m}$ .

Therefore, from the disclosure of Nakano and the information gleaned from common knowledge and Michihata it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the polarizing plate of Nakano by using protective layer with a thickness in a range of 20  $\mu\text{m}$  to 40  $\mu\text{m}$  to obtain a polarizing film that has reduced thickness and thus light weigh.

Accordingly, claims 1, 10, 19 and 23-27 would have been obvious.

As to claims 6-9 and 15-18, attaching a reflector to obtain a reflective display or a retarder or a viewing angle compensation film to increase viewing angle characteristics

or a brightness enhancement film to obtain a brighter screen to the polarizing plate is considered as intended use and thus would have been obvious.

***Allowable Subject Matter***

5. Claims 28-40 are allowed.
6. Claims 2-5, 11-14 and 20-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC  
April 22, 2004



TARIFUR R. CHOWDHURY  
PRIMARY EXAMINER